### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claim 1 (Cancelled).

2. (Currently Amended) A compound represented by formula [2]

#### (Formula 21

$$X^3$$
 $X^4$ 
 $F$ 
 $F$ 
 $F$ 
 $X^8$ 
 $X^9$ 
 $X^2$ 
 $X^1$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $X^8$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted annumber of unsubstituted annumber of unsubstituted annumber of unsubstituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$ 

is bonded to  $\mathbf{X}^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

3. (Currently Amended) A compound represented by Formula [3]

{Formula 3}

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

Claim 4 (Cancelled).

5. (Currently Amended) A method of producing a compound represented by formula [13]

## {Formula 7}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group), comprising the step of

producing a compound represented by formula [13] by reacting a compound represented by formula [11]

### {Formula 5}

$$X^3$$
 $X^4$ 
OH O
 $X^3$ 
 $X^4$ 
OH O
 $X^3$ 
 $X^4$ 
OH O
 $X^3$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ , and  $X^4$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or

unsubstituted phenyl group, a substituted or unsubstituted naphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a compound represented by formula [12]

### [Formula 6]

(wherein  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted naphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) in the presence of a Lewis acid.

6. (Original) The production method according to claim 5, wherein the Lewis acid comprises aluminum chloride.

7. (Currently Amended) A method of producing a compound represented by formula [14]

## [Formula 9]

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [13]), comprising the step of

producing a compound represented by formula [14] by reacting a compound represented by formula [13]

### [Formula 8]

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

8. (Currently Amended) A method of producing a compound represented by formula [15]

### {Formula 11}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [13]), comprising the step of

producing a compound represented by formula [15] by reacting a compound represented by formula [13]

### <del>[Formula 8]</del>

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$ 

is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

9. (Currently Amended) A method of producing a compound represented by formula [14]

## {Formula 13}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [15]), comprising the step of

producing a compound represented by formula [14] by reacting a compound represented by formula [15]

# <del>[Formula 12]</del>

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a

monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

10. (Currently Amended) A method of producing a compound represented by formula [16]

## {Formula-15}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [13]), comprising the step of

producing a compound represented by formula [16] by reacting a compound represented by formula [13]

## {Formula 14}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted annual group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and

may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

- 11. (Original) The production method according to any of claims 7 to 10, wherein the fluorinating agent comprises sulfur tetrafluoride.
- 12. (Currently Amended) A method of producing a compound represented by formula [2]

## {Formula 17}

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [14]), comprising the step of

producing a compound represented by formula [2] by reacting a compound represented by formula [14]

## [Formula 16]

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a reducing agent.

13. (Currently Amended) A method of producing a compound represented by formula [2]

## {Formula 19}

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  are defined as for formula [16]), comprising the step of

producing a compound represented by formula [2] by reacting a compound represented by formula [16]

## {Formula 18}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted naphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group with a reducing agent.

- 14. (Original) The production method according to claim 12 or 13, wherein the reducing agent comprises zinc, iron, copper, nickel, palladium, or a combination thereof.
- 15. (Currently Amended) A compound represented by formula [13]

{Formula 20}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

16. (Currently Amended) A compound represented by formula [14]

<del>[Formula 21]</del>

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a

monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

17. (Currently Amended) A compound represented by formula [15]

{Formula 22}

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted or anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic or condensed polycyclic hydrocarbon group).

18. (Currently Amended) A compound represented by formula [16]

{Formula 23}

$$X^3$$
 $X^4$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $X^8$ 
 $X^9$ 
 $X^2$ 
 $X^1$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $F$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ , and  $X^{11}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anaphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

19. (Currently Amended) A method of producing a compound represented by formula [22]

### {Formula 25}

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{1}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  are defined as for formula [21]), comprising the step of

producing a compound represented by formula [22] by reacting a compound represented by formula [21]

### [Formula 24]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{1}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

20. (Currently Amended) A method of producing a compound represented by formula [23]

## {Formula 27}

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  are defined as for formula [21]), comprising the step of

producing a compound represented by formula [23] by reacting a compound represented by formula [21]

### [Formula 26]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
[21]

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

21. (Currently Amended) A method of producing a compound represented by formula [22]

### [Formula 29]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  are defined as for formula [23]), comprising the step of

producing a compound represented by formula [22] by reacting a compound represented by formula [23]

[Formula 28]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

22. (Original) The production method according to any of claims 19 to 21, wherein the fluorinating agent comprises sulfur tetrafluoride.

23. (Currently Amended) A method of producing a compound represented by formula [3]

### {Formula 31}

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{2}$ 
 $X^{1}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  are defined as for formula [22]), comprising the step of

producing a compound represented by formula [3] by reacting a compound represented by formula [22]

### {Formula 30}

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to

 $\mathbf{X}^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a reducing agent.

- 24. (Original) The production method according to claim 23, wherein the reducing agent comprises zinc, iron, copper, nickel, palladium, or a combination thereof.
- 25. (Currently Amended) A compound represented by formula [22]

#### [Formula 32]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{1}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

26. (Currently Amended) A compound represented by formula [23]

[Formula 33]

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{7}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{1}$ 
 $X^{14}$ 
 $X^{14}$ 
 $X^{12}$ 
 $X^{11}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^5$ ,  $X^7$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ ,  $X^{12}$ , and  $X^{14}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).

27. (Currently Amended) A method of producing a compound represented by formula [32]

{Formula 35}

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $X^{6}$ 
 $F$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  are defined as for formula [31]), comprising the <u>stepmethod</u> of

producing a compound represented by formula [32] by reacting a compound represented by formula [31]

## {Formula 34}

$$X^{3}$$
 $X^{4}$ 
 $X^{6}$ 
 $X^{6}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

28. (Currently Amended) A method of producing a compound represented by formula [33]

## <del>[Formula 37]</del>

$$X^{3}$$
 $X^{4}$ 
 $X^{5}$ 
 $X^{6}$ 
 $X^{7}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  are defined as for formula [31]), comprising the <u>stepmethod</u> of

producing a compound represented by formula [33] by reacting a compound represented by formula [31]

### <del>[Formula 36]</del>

$$X^{3}$$
 $X^{4}$ 
 $X^{6}$ 
 $X^{6}$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted naphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to

 $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

29. (Currently Amended) A method of producing a compound represented by formula [32]

## {Formula 39}

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $X^{6}$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  are defined as for formula [33]), comprising the <u>stepmethod</u> of

producing a compound represented by formula [32] by reacting a compound represented by formula [33]

## <del>[Formula 38]</del>

$$X^{3}$$
 $X^{4}$ 
 $X^{6}$ 
 $X^{6}$ 
 $X^{7}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted naphthyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or

different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a fluorinating agent.

- 30. (Original) The production method according to any of claims 27 to 29, wherein the fluorinating agent comprises sulfur tetrafluoride.
- 31. (Currently Amended) A method of producing a compound represented by formula [4]

## [Formula 41]

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $X^{6}$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{2}$ 
 $X^{1}$ 
 $F$ 
 $X^{13}$ 
 $F$ 
 $X^{11}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  are defined as for formula [32]), comprising the <u>stepmethod</u> of

producing a compound represented by formula [4] by reacting a compound represented by formula [32]

### [Formula 40]

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $X^{6}$ 
 $F$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 
 $X^{10}$ 

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group) with a reducing agent.

32. (Original) The production method according to claim 31, wherein the reducing agent comprises zinc, iron, copper, nickel, palladium, or a combination thereof.

Claim 33 (Cancelled).

34. (Currently Amended) A compound represented by formula [32]

[Formula 43]

$$X^{3}$$
 $X^{4}$ 
 $F$ 
 $F$ 
 $X^{6}$ 
 $F$ 
 $F$ 
 $X^{8}$ 
 $X^{9}$ 
 $X^{10}$ 
 $X^{10}$ 
[32]

(wherein  $X^1$ ,  $X^2$ ,  $X^3$ ,  $X^4$ ,  $X^6$ ,  $X^8$ ,  $X^9$ ,  $X^{10}$ ,  $X^{11}$ , and  $X^{13}$  represent fluorine, hydrogen, a substituted or unsubstituted  $C_{1-8}$  alkyl group, a substituted or unsubstituted phenyl group, a substituted or unsubstituted anthracenyl group, a substituted or unsubstituted anthracenyl group, or a substituted or unsubstituted naphthacenyl group, or a substituted or unsubstituted pentacenyl group, and may be the same or different; or  $X^2$  is bonded to  $X^3$  to form a monocyclic or condensed polycyclic hydrocarbon group and/or  $X^9$  is bonded to  $X^{10}$  to form a monocyclic or condensed polycyclic hydrocarbon group).